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American Association of
State Highway and
Transportation Officials

Howard Yerusalim, President
Secretary of the
Pennsylvania Department
of Transportation

Francis B. Francois
Executive Director

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JUN 15 1994
FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF SECRETARY

June 15, 1994

Office of the Secretary
Federal Communications Commission
Washington, D.C. 20554

RE: ET Docket No. 94-32

Dear Sir or Madam:

Enclosed are an original and nine copies of comments on certain parts of the referenced Notice of Inquiry. These comments focus primarily upon the unique functions of the highway and transportation system and radio user.

Thank you for your consideration of AASHTO's position on this important matter.

Yours truly,

David J. Hensing
Deputy Executive Director

DJH:TCD

encl.

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JUN 15 1994

FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF SECRETARY

Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of	)	
	)	
Allocation of Spectrum Below	)	ET Docket No. 94-32
5 GHz Transferred From	)	
Federal Government Use	)	

COMMENTS OF THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS SPECIAL COMMITTEE ON COMMUNICATIONS

by

Its Chairman

Alan Hull

June 15, 1994

Before the

Federal Communications Commission

Washington, D.C. 20554

In the Matter of	)	
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5 GHz Transferred From	)	
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TO: The Commission

Comments

The American Association of State Highway and Transportation Officials respectfully submits these Comments on the Commission's Notice of Inquiry in the above-captioned proceeding.

AASHTO is the national association of the state departments of highways and transportation in the 50 states, the District of Columbia and Puerto Rico. Its scope includes all five principal transportation modes, and its major purpose is to foster the development, operation and maintenance of an integrated national transportation system.

Introduction

AASHTO serves as the Commission's certified frequency coordinator for the highway maintenance radio service frequencies as well as public safety shared frequencies.

AASHTO, through its Special Committee on Communications has monitored the development of radio frequency devices and their uses in providing for and enhancements to a national intermodal transportation system for more than 40 years.

The current primary usage of land mobile two-way radio systems by member departments is for traditional voice and fixed systems. The transmission of data via point to point microwave systems which are interconnected to mobile units assists State and local traffic managing centers in directing transportation work crews as they respond to routine and emergency activities. Furthermore, applications for communications systems such as these are currently increasing.

Another recent development which has expanded the reliance upon rapid voice and data radio frequency transmissions is the development of a national Intelligent Vehicle Highway System (IVHS). The frequency bands included in the NTIA Preliminary Spectrum Reallocation Plan appear to be compatible with many IVHS functions such as automatic vehicle location and monitoring, roadside to vehicle signing, alerting of an existing or potential emergency highway condition, automated toll collection, as well as other related traffic control functions. (The

Intelligent Vehicle Highway Society of America will respond to this inquiry independently, on behalf of the IVHS community.)

Position Statement

In Section 9(a) of ET Docket Number 94-32, the Commission seeks comment on the usefulness of the spectrum identified for immediate reallocation for private sector use. The bands, 2390-2400 MHz, 2402-2417 MHz and 4660-4685 MHz are best suited for small area and point to point communications systems, considering their radio wave propagational characteristics. While existing two-way land mobile radio systems may not be directly expanded using the reallocated spectrum, a variety of auxiliary services such as private personal communications systems (PCS), in-building paging systems or an assortment of IVHS technologies, as well as other related services, can be added to improve and expand the functions of many existing systems.

A portion of the frequencies in this reallocated spectrum could also be used for point to point systems being forced to relocate due to Memorandum Opinion and Order, ET Docket Number 92-9[1].

[1]See Notice of Proposed Rule Making ET Docket No. 92-9, §§ 19, 20 and 21 which discuss the Commission's proposition to permit existing fixed microwave users in the 1.85-1.99, 2.11-2.15 and 2.16-2.20 GHz bands to relocate to higher frequency fixed microwave bands or to alternative media.

Section 9(b) requests suggestions on restrictions that should be placed on uses of the aforementioned bands. Members of the AASHTO Special Committee on Communications believe that the restriction suggested by the Department of Commerce for the 2390-2400 MHz band appears to be reasonable and should not present a negative effect on competition or access to new services.

Section 9(c) asks for opinions as to whether the recommended reallocation will avoid excessive disruption of existing Federal Government communications by amateur service licensees. The two megahertz segment at 2400-2402 MHz is sufficient to avoid excessive disruption of existing Federal Government frequencies by amateur service licensees and should be sufficient for existing amateur-satellite operations.

In Section 9(e) the Commission asks if new non-Federal services in these bands will be able to share the spectrum with existing services. While some usage of the 2402-2417 MHz band is possible, major interference problems will be caused by the use of ISM equipment and especially by the proliferation of microwave ovens, when these frequencies are used in or near any populated areas.

Section 9(f) requests comment on the utility for public safety communications systems of the spectrum identified for immediate reallocation. The usefulness of the identified spectrum, to the public safety community in general and the highway maintenance licensee in particular, would be extremely limited and interoperability would be virtually nonexistent.

Current highway maintenance radio systems utilize VHF low-band (47 MHz), VHF high-band (150 MHz) and UHF (450 MHz) frequencies in simplex, repeater and trunking configurations. The identified microwave frequencies do not lend themselves, by virtue of their propagation characteristics, to the coverage requirements of these users.

The identified frequencies can be utilized by users displaced by PCS for point to point microwave and for close-proximity Intelligent Vehicle Highway Systems (IVHS). Current technology supports only these two uses at microwave frequencies.

The frequency allocation will allow public safety to utilize spectrum adjacent to PCS, thereby taking cost advantage of mass produced PCS equipment for public safety use. Inexpensive PCS type equipment will enhance public safety interoperability at the scene of a major incident, improving coordination and safety of everyone.

Section 9(h) asks for comment on whether it would be advantageous to delay licensing some of the 50 megahertz of immediately available spectrum. We do not believe it is advantageous to delay licensing. Frequencies designated in the reallocation spectrum are divided up in a manner which renders them much less effective for land mobile users than for specialized services like IVHS. Having additional blocks available later probably will not be advantageous since it could delay licensing. These frequencies should be made available immediately for applicants that can effectively use them.

The Commission, at footnote 21 of this Notice of Inquiry, also requests comments on the Petition for Rule Making filed December 23, 1993 by the Coalition of Private Users of Emerging Multimedia Technologies (COPE). AASHTO, through its Special Committee on Communications, has reviewed the COPE Petition and offers the following comments:

The Commission is correct in recognizing the need for a spectrum allocation for commercial PCS. The reasons cited by the Commission for this allocation for commercial systems are equally valid for private and public safety PCS.

Private and public safety organizations need the flexibility to furnish the most cost effective communications systems for their users. This may take the form of commercial carrier provided systems, or a privately owned and operated system.

Conclusion

The Commission should consider the potential savings for Governmental entities as well as the benefit to the general public, of allowing public safety organizations to utilize emerging technologies in their private radio systems. These systems are utilized in both normal and emergency types of operations and can reduce the loss of life and property caused by natural and man-made incidents.

The COPE Petition contains sufficient documentation supporting the need for a Spectrum Allocation for Private Land Mobile Advanced Communications Systems. AASHTO endorses the COPE Petition and further requests that the Commission consider this endorsement, as well as the other comments contained herein and act favorably upon them, as it proceeds with this important undertaking.

Respectfully submitted,

for Alan Hull
Chairman, Special Committee on Communications

American Association of State
Highway and Transportation Officials